

ATTACHMENT 6

Results of pulse velocity and compressive strength laboratory measurements on cylindrical concrete specimens

FHWA, Materials Branch

CARSON RIVER BRIDGE
ERFO BIA WASH 1(1)

FEDERAL HIGHWAY ADMINISTRATION

Central Federal Lands Highway Division

REPORT OF COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS

Project : Nevada - ERFO BIA WASH 1(1) Carson River Bridge**Submitted By :** Ken Southall**Date Reported :** 8-15-00

Field Number	CSL- 1 - 12	CSL - 1 - 12		CSL 1-2	
Lab Number	00-553-CC	00-554-CC		00-561-CC	
Concrete Class	Seal	Seal		Seal	
Placement Location	Pier 1 Shaft 2 & 3	Pier 1 Shaft 2 & 3		Pier 1 Shaft 1	
Slump, MM AASHTO T119	143	143		74	
Air Content, % AASHTO T152	2.6	2.6		2.3	
Water, L	NA	NA		NA	
Cement, Kg	NA	NA		NA	
Fine Aggregate, Kg	NA	NA		NA	
Coarse Aggregate, Kg	NA	NA		NA	

Date Molded	7-12-00	7-12-00		7-13-00	
Date Received <i>DATE</i>	7-14-00	7-14-00		7-17-00	
Date Tested <i>DATE</i>	7-17-00	7-17-00		7-18-00	
Age, days	5	5		5	

Compressive Strength AASHTO T 22					
Capping Material	Neoprene	Neoprene		Neoprene	
Diameter, MM	4.00	4.01		4.00	
Cross-Sectional Area, MM ²	8103.25	8148.50		8109.75	
Total Load, N	189240	166400		194000	
Compressive Strength, KPa	23370	20410		23920	
Fracture Type	Cone	Cone		Cone	

Remarks :

Pulse Velocity, ASTM C 597 (ft/s)

13,160

13,530

13,480

All three cylinders had to be trimmed with a diamond saw because they were not finished in accordance with AASHTO T23, paragraph 8.4

Distribution :

Materials 3 copies
 Project Engineer Dennis Black
 Construction Ed Hammondtree
 Geotechnical Khamis Harmacy
 Quality Assurance Rick Marquez
 Pavements Ron Andresen

Reported by :

 Darrell Harding

John Stites, P.E.
 Materials Engineer

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Field Number	CSL 1-12	CSL 1-12		CSL 1-12	
Lab Number	00-555-CC	00-556-CC		00-562-CC	
Concrete Class	Seal	Seal		Seal	
Placement Location	Pier 1 Shaft 2&3	Pier 1 Shaft 2 &3		Pier 1 Shaft 1	
Slump, MM AASHTO T119	143	143		74	
Air Content, % AASHTO T152	2.6	2.6		2.3	
Water, L	NA	NA		NA	
Cement, Kg	NA	NA		NA	
Fine Aggregate, Kg	NA	NA		NA	
Coarse Aggregate, Kg	NA	NA		NA	

Date Molded	7-12-00	7-12-00		7-13-00	
Date Received	DATE	7-14-00		7-17-00	
Date Tested	DATE	7-19-00		7-20-00	
Age, days	7	7		7	

Compressive Strength AASHTO T 22

Capping Material	Neoprene	Neoprene		Neoprene	
Diameter, MM	101.50	101.50		101.50	
Cross-Sectional Area, MM ²	8109.75	8109.75		8109.75	
Total Load, N	199520	196590		201700	
Compressive Strength, KPa	24610	24270		24890	
Fracture Type	Shear	Shear		Cone	

Remarks :

Pulse Velocity, ASTM C 597 (ft/s) 13,440 13,210 13,740
 All three cylinders had to be trimmed with a diamond saw because they were not finished in accordance with AASHTO T 23, paragraph 8.4

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REPORT OF COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS

Project : Nevada - ERFO BIA WASH 1(1) Carson River Bridge**Submitted By :** KEN Southall**Date Reported :** 8-15-00

Field Number	CSL 1-12	CSL 1-12		CSL 1-12	
Lab Number	00-557-CC	00-558-CC		00-563-00	
Concrete Class	Seal	Seal		Seal	
Placement Location	Pier 1 Shaft 2 & 3	Pier 1 Shaft 2 & 3		Pier 1 Shaft 1	
Slump, MM AASHTO T119	143	143		74	
Air Content, % AASHTO T152	2.6	2.6		2.3	
Water, L	NA	NA		NA	
Cement, Kg	NA	NA		NA	
Fine Aggregate, Kg	NA	NA		NA	
Coarse Aggregate, Kg	NA	NA		NA	

Date Molded	7-12-00	7-12-00		7-13-00	
Date Received <i>DATE</i>	7-14-00	7-14-00		7-17-00	
Date Tested <i>DATE</i>	7-26-00	7-26-00		7-27-00	
Age, days	14	14		14	

Compressive Strength AASHTO T 22

Capping Material	Neoprene	Neoprene		Neoprene	
Diameter, MM	101.75	101.50		101.50	
Cross-Sectional Area, MM ²	8148.50	8109.75		8109.75	
Total Load, N	216800	213420		236910	
Compressive Strength, KPa	26610	26340		29230	
Fracture Type	Cone	Cone		Shear	

Remarks :

Pulse Velocity, ASTM C 597 (ft/s) 13,600 13,920 14,360
 All three cylinders had to be trimmed with a diamond saw because they were not finished in accordance with AASHTO T-23, paragraph 8.4

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Project : Nevada - ERFO BIA WASH 1(1) Carson River Bridge**Submitted By :** Ken Southall**Date Reported :** 8-15-00

Field Number	CSL 1-12	CSL 1-12		CSL 1-12	
Lab Number	00-559-CC	00-560-CC		00-564-CC	
Concrete Class	Seal	Seal		Seal	
Placement Location	Pier 1 Shaft 2 & 3	Pier 1 Shaft 2 & 3		Pier 1 Shaft 1	
Slump, MM AASHTO T119	143	143		74	
Air Content, % AASHTO T152	2.6	2.6		2.3	
Water, L	NA	NA		NA	
Cement, Kg	NA	NA		NA	
Fine Aggregate, Kg	NA	NA		NA	
Coarse Aggregate, Kg	NA	NA		NA	

Date Molded	7-12-00	7-12-00		7-13-00	
Date Received <i>DATE</i>	7-14-00	7-14-00		7-17-00	
Date Tested <i>DATE</i>	8-9-00	8-9-00		8-10-00	
Age, days	28	28		28	

Compressive Strength AASHTO T 22

Capping Material	Neoprene	Neoprene		Neoprene	
Diameter, MM	101.75	101.50		102.50	
Cross-Sectional Area, MM ²	8148.25	8109.75		8264.50	
Total Load, N	245780	241460		270150	
Compressive Strength, KPa	30130	29780		32680	
Fracture Type	Shear	Shear		Cone	

Remarks :

Pulse Velocity, ASTM C 597 (ft/s) 13,980 15,500 14,610
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